

Appl. No. 09/832,236

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Amendments to the Claims

Claims 1- 54 (cancelled).

Claim 55 (previously presented): A method of forming a conductive material, comprising:

providing a semiconductor substrate;

forming an insulative material over the substrate, wherein the insulative material comprises sidewalls defining an opening extending to the substrate in at least one cross-section;

forming a first conductive material over the substrate and within the opening, the first conductive material comprising one or more of TiN, WN, TaN, elemental Ta, and elemental Ti;

depositing a second conductive material physically against the first conductive material, the second conductive material consisting essentially of a metal and being different than the first conductive material, wherein the depositing comprises:

providing a metallo-organic precursor proximate the first conductive material, wherein the metallo-organic precursor consists essentially of tricarbonyl-cyclohexadiene ruthenium; and

exposing the precursor to a reducing atmosphere to release the metal from the precursor to form the second conductive material physically against the first conductive material without an insulative composition between the first and second conductive materials, wherein the reducing atmosphere consists

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essentially of ammonia, and the second conductive material has a thickness of about 450 Å; and

etching the second conductive material into a rectangular block, wherein the sidewalls of the block are aligned vertically between the sidewalls defining the opening in at least the one cross-section.

Claim 56-69 (cancelled).

Claim 70 (previously presented): The method of claim 55 wherein the block is aligned horizontally above the insulative material in at least the one cross-section.

Claim 71 (previously presented): A method of forming a conductive material, comprising:

providing a semiconductor substrate;

forming an insulative material over the substrate, wherein the insulative material comprises sidewalls defining an opening extending to the substrate in at least one cross-section;

forming a first conductive material over the substrate and within the opening, the first conductive material comprising one or more of TiN, WN, TaN, elemental Ta, and elemental Ti;

depositing a second conductive material physically against the first conductive material, the second conductive material consisting essentially of a metal and being different than the first conductive material, wherein the depositing comprises:

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providing a metallo-organic precursor proximate the first conductive material, wherein the metallo-organic precursor comprises the metal and carbon; and

exposing the precursor to a reducing atmosphere to release the metal from the precursor to form the second conductive material physically against the first conductive material without an insulative composition between the first and second conductive materials, wherein the reducing atmosphere consists essentially of ammonia; and

etching the second conductive material into a rectangular block, wherein the sidewalls of the block are aligned vertically between the sidewalls defining the opening in at least the one cross-section.

Claim 72 (previously presented): The method of claim 71 wherein the metallo-organic precursor consists essentially of tricarbonyl-cyclohexadiene ruthenium.

Claim 73 (previously presented): The method of claim 71 wherein the second conductive material has a thickness of about 450 Å.

Claim 74 (previously presented): The method of claim 71 wherein the block is aligned horizontally above the insulative material in at least the one cross-section.